

OBSERVATIONS

ON THE

BEST MODE OF REGISTERING DEATHS.

READ AT AN EVENING MEETING OF THE ROYAL COLLEGE
OF PHYSICIANS, JUNE 1843.

By WILLIAM PULTENEY ALISON, M.D., F.R.S.E.,

Professor of the Practice of Medicine in the University of Edinburgh, and one of the Physicians
in Ordinary to her Majesty for Scotland.

[*From the Northern Journal of Medicine for August 1844.*]

THE subject of Registration of Deaths with a view to facilitating statistical inquiries into the history, causes, and prevention of diseases, has been pretty fully considered and reported on by a committee of this college; and I think every one who has experienced the difficulty of extracting satisfactory information from the Registers now existing, must admit its importance. A decided opinion was expressed by that committee, that the method adopted by the medical advisers of the Registrar-General in England, and according to which the deaths there occurring are arranged and classified, although a great improvement on the old bills of mortality, is liable to very serious objections. The objections which we stated have been considered at some length by Mr Farr, in a paper contained in the Fourth Annual Report of the Registrar-General of England; and the members of this college may be somewhat disappointed at perceiving that, although expressing himself in complimentary terms towards us, he declines adopting any of our suggestions, and gives a decided opinion that his plan of registration is much superior to ours in almost every respect.

As I am by no means convinced by his reasoning, I wish to lay before the college the reasons which still lead me to think that the plan which we proposed is decidedly preferable, and that if a registration bill for Scotland shall be brought forward, we ought to endeavour to have the registration of deaths under it conducted according to our plan rather than according to that which is now adopted in England.

We must bear in mind that, in a scientific view of the subject, the main objects of such registrations are—

1st, To secure the greatest amount of authentic information as to the causes of death.

2dly, To separate distinctly that information which must necessarily be only general, from that which may be expected to be minute and precise; and,

3dly, To facilitate the labours of future statistical inquirers who may wish to have various portions of this information thrown into the form of tables.

The objections which we stated to the English plan related, 1st, to the form of the schedule according to which the deaths are registered; 2dly, to the nomenclature of diseases, to which all practitioners are requested to conform.

I. The essential difference between our schedule and theirs is, that we wish to have that part of the Register appropriated to the cause of deaths, divided into two columns—one to be filled up in every case without exception, but which is to contain, not the name of the disease (unless in the case of well-known epidemics) but only the seat of the disease, and its nature as acute or chronic; the other column to give the name of the disease, always on medical authority, and only when well ascertained. This column will be filled, of course, in a much smaller number of cases, but will always give precise and accurate information, in conformity to printed directions to be put into the hands of all practitioners. We suggested, also, that each column should be subdivided into two,—the first stating what diseases are acute and what chronic; the second stating what disease caused death, and what (if any) previously existed.

On the other hand, in the English registers only one column is assigned for the cause of death; and Mr Farr thinks it preferable to have all the particulars stated in this single column. The following sketch shows the difference of the two plans:—

<i>Plan recommended by the Edinburgh Committee.</i>				<i>Improved English Plan.</i>
Duration and Seat of Disease.		Name of Disease.		Cause of Death.
<i>Acute.</i>	<i>Chronic.</i>	<i>Causing Death.</i>	<i>Previously existing Disease, or cause.</i>	
Bowels.	—	Dysentery.	—	Dysentery, 20 days.
—	Chest.	Consumption.	—	Consumption, 1 year.
Chest.	—	Pleurisy.	Epidem. fever.	Typhus, 17 days. Pleurisy, 2 days (p. mort.)

Our reasons for preferring the plurality of columns are these:
1st, We consider it quite certain that, as to a large proportion

of the deaths, there will be no report by a medical man, on which reliance can be placed ; the cases either having been seen by none, or seen so cursorily, or at so advanced a period, as to make it impossible for them to pronounce confidently on their exact nature. This, I think, all practitioners will admit to be true, even of many cases of which they could say, with a good deal of confidence, whether any and what remedies were likely to be of service ; and if so, it is obvious that to *require* or even to *invite* a declaration of the cause of death, in the same mode, in all cases whatever, is to make the statistical statements to be founded on those registers an almost certain source of fallacy, and of erroneous doctrine.

This is substantially admitted by Mr Farr himself, for he says that in England the names of diseases have often been returned, particularly as to cases not seen by medical men, *in a very unsatisfactory manner* ; but the remedy which he suggests is, to have all such cases inquired into *after death* by medical men, and then named ; which, as it appears to me, is not a procedure that can be adopted, at least in Scotland, with any prospect of more satisfactory results.

But, on the other hand, it is equally certain that there are various particulars which are easily ascertained, in regard to all cases without exception, and which of themselves, if ascertained uniformly and universally, will give results of great importance. These are, not only the age, sex, precise locality, and condition or mode of life of the deceased, but likewise the duration of his disease, as acute or chronic ; in the case of well-known epidemics, the name may be safely assigned, and in all cases of sporadic diseases, the part of the body in which the chief symptoms appeared.

The importance of having these particulars recorded as to *all* cases, combined with the impossibility of having a scientific statement of the cause of death in *many*, forms the difficulty which we propose to surmount by the two distinct and even subdivided columns.

It is no doubt possible to record all the particulars that we wish in a single column, and to have the names of diseases only assigned in that column when it can be done accurately, and afterwards to *pick out*, from the entries there, the cases which are accurately named, as distinguished from those of which we know only the seat and duration. But let us observe the inconveniences of this mode of proceeding.

1st, There is much greater trouble in throwing the information required into the form of tables. For example, if we wish to know how many acute and how many chronic diseases of the head are recorded in a given register and within a given time, how many of these have been registered in general terms only, and how many accurately named, we should have the trouble of seeking out and reflecting on the import of a great number of individual words, instead of merely summing up a column of figures.

2dly, By having only one column, in which all the particulars regarding the cause of death are to be stated, the attention of those making up the registers, whether medical men or not, is not fixed on the *different particulars* in regard to fatal disease which demand separate consideration, and there is a much greater chance of careless and fallacious registration.

3dly, No distinct line of demarcation is drawn between cases carefully observed and recorded by medical men, and cases the real nature of which may be quite unknown.

I admit that there is some force in the objection stated by Mr Farr to our division of acute and chronic diseases, according as they are of less or more than six weeks' duration; viz. that you might as well divide all people into young and old, according as they are above or below the age of twenty. But still it appears to me, that the chief practical use which can be made of the entries of the duration of diseases, in Mr Farr's own column, will be to make up tables of diseases of different parts of the body and in different times and places, as *acute* or *chronic*, and I do not know a better line of distinction between acute and chronic diseases than that which we have stated. The formation of such tables will of course be extremely facilitated by having these separate columns; and then, as the precise duration may be stated in each individual case in one or other of those columns, the more precise information which he considers essential may be obtained from our register equally as from his.

But the objections which he states to our having a column for the seat of disease, as distinguished from the name, proceed on an entire misapprehension. He says that nobody who is to use the registers will require to be informed that consumption is a disease of the lungs, and so forth;—not observing that our reason for wishing the latter fact to be stated in all cases is, that we are sure it can be accurately stated in many, in which the disease cannot be named, or will be named incorrectly; therefore, that by this column we gain a piece of authentic and important information, extending to a much larger number of cases than the named diseases. But we have the names given as distinctly as he has, in all those cases in which that information can be given on proper authority, and is therefore of real value.

That he has misapprehended the practical working of our plan appears distinctly from his criticism on it, at p. 215 (of Fourth Annual Report): "The Edinburgh Committee have assumed that distinct diseases, which cannot be distinguished in all cases and by all practitioners, should invariably be confounded under the same entry in the register. For instance, because it is probable that C and D would often confound croup, quinsy, and laryngitis, they would direct A and B and all well-informed practitioners to return the three diseases to the registers as 'acute disease of the windpipe.' What would be the consequence of a

recommendation of this kind? If the cases of croup, laryngitis, and quinsy are stated separately, it will be an easy matter to add them together; but if the three diseases be confounded systematically in all the registers, they can never afterwards be analyzed. According to Dr Alison's plan, all the physicians and surgeons of the country, whatever might be their skill in diagnosis, whatever be the progress of medical science, would be bound to assign the cause of death in general terms, instead of the precise terms by which diseases are generally designated."

Now, according to our plan, every physician and surgeon will be at liberty to exercise his skill in diagnosis to the utmost, because he will be *asked* to give a name to every case which he has seen (although a shorter and simpler nosology than that of Mr Farr will be recommended to him); but it can be no great trouble to him, *besides giving the name*, or when he is uncertain as to the precise name, to enter the disease in our first column as one of the head, chest, or abdomen; and by doing so he will enable any future inquirer easily to enter the case in two distinct lists, both equally authentic, the one containing certain particulars only, the other, a shorter list, containing more minute information.

It is to be observed, that in all Mr Farr's lists there are a number of cases recorded merely as *disease of the head, disease of the lungs, &c.*, which is an admission of our principle, that the seats of diseases can be stated in a number of cases where the names cannot be assigned. But these cases, from the deficiency of his plan, are not stated as acute or chronic; and their number is so small in comparison to those where the disease is named, as to show very distinctly, that on the names assigned to many of these cases little reliance can be placed as a scientific record.

I think I have shown that the plan of two columns with subdivisions,—although a little more troublesome to the framers of the schedules,—will be in fact less troublesome to the recorders of deaths, than Mr Farr's plan of crowding so many particulars into single columns, while it will give great facilities to future scientific inquirers.

There is a suggestion contained in Mr Chadwick's Report upon the sanitary condition of the labouring classes, which shows very distinctly the importance of having authentic records, not only of the diseases causing deaths, but of the circumstances attending and causing diseases, viz., that in addition or as superior to the medical officers in charge of districts (that is, of unions under the amended English poor-law) there should be a small number of superintendent medical officers charged with all inquiries affecting the public health, and that one of their duties should be the examination of the registers, to ascertain whether any particular diseases prevail at particular times in individual districts or classes of the community in an unusual degree, and if so, whether these can be traced to removable causes. It is obvious how much the labours of such men would be facilitated

by such a form of the registration of deaths as we recommend, with one simple addition, that our last column should comprise, as suggested above, not only any previously existing disease, but cause of disease.*

Of the facility of registers being kept in the way we propose, we have fortunately an example in the parish of South Leith, where, under the direction of Mr Lyon, the session-clerk, the register has been kept for some time past almost precisely on that plan.

II. On the list of diseases adopted in the English returns, as compared with the much shorter list recommended by the committee of this college, I do not think it necessary to enlarge, being quite content to leave it to the judgment of the profession, whether it be expedient, or likely to lead to useful results, to invite all practitioners to enter on the minute and sometimes ambiguous distinctions in giving the names of diseases which the English lists require. But there is an unfortunate difference of opinion between Mr Farr and our committee in regard to the great leading division (of the importance of which we are all agreed),—that of *plagues*, or epidemic and endemic diseases, occurring only within certain limits of time and space, and the *sporadic* diseases, of more uniform occurrence,—which demands a little consideration.

Mr Farr's principle is, that if any disease, or if cases which assume the characters of any disease, and are not easily distinguished from it, become epidemic at greater or less intervals of time,—even although it be only in what he calls unhealthy places and among the sickly classes,—that disease must be ranked among the plagues, and all cases of it, in all seasons, and however isolated they may appear, must be set down in the great division of epidemic and endemic diseases. Any other plan, he says, would lead to endless confusion.

Hence he sets down every year all cases of croup, of aphthæ, of dysentery, cholera and diarrhœa, and erysipelas, among the epidemic, endemic, and contagious diseases. He is strongly impressed indeed with the importance of distinguishing croup, which he thinks an epidemic disease, from laryngitis and from quinsy, which he ranks among the sporadic (which distinction I apprehend to be a difficult matter); but thinks that all the cases of cholera now occurring must be classed with malignant or Asiatic cholera, and that it is quite as unreasonable to distinguish them, as to separate mild from malignant scarlatina; whereas I believe that we in Edinburgh will generally maintain, not only that in a great majority of cases even fatal sporadic cholera is easily distinguished from the malignant, but that they are essentially and pathologically distinct diseases, and that the true malignant cholera was never seen in Scotland before 1831, and has not been seen since 1833.

In regard to several of the diseases in question—dysentery, erysipelas, croup, or even diarrhœa—we must allow that occasions do occur when they prevail epidemically or endemically, although

* Chadwick's Sanitary Report, p. 352.

not to be distinguished by their symptoms from the sporadic and often isolated cases, which may often be distinctly traced to cold, to repletion, or other causes of continual occurrence. But I cannot think it right,—on the contrary, I think it must tend to endless confusion,—to rank, on that account, *all* cases of these diseases among plagues or epidemics.

The reason of making a distinct class of epidemics, and laying stress on their distinction from other diseases in statistical inquiries, is, that the study of their history, causes, and means of prevention, is essentially distinct from the study of the same particulars in regard to the sporadic diseases; but this reason exists no longer, when we find that *all* cases, however isolated, of croup, aphthæ, diarrhœa, or cholera, are ranked among the epidemics, with smallpox and measles. Nobody can suppose that the means of prevention, applicable to ordinary cases of any of these diseases, have any analogy to the means by which we strive to arrest the extension of malignant cholera, or of plague, and with a view to which we study the histories of the diffusion of these diseases.

The only way, as it seems to me, of avoiding such difficulties, or even absurdities, is that which we formerly suggested. Let each of those diseases, when it occurs, as usual, in isolated cases, be entered among the sporadic diseases; but when any practitioner meets with such cases occurring so frequently, within narrow limits of time or space, as to indicate, in his opinion, the existence of a local and temporary cause, let him be requested to prefix the term epidemic, and those cases may then be ranked in the tables along with the epidemic diseases. And although there may occasionally be a difference of opinion as to whether the term epidemic is rightly applied, yet as in every such case the number of deaths attributed to such epidemic influence in any locality will appear, it will always be in the power of any one who uses the register to form a judgment on the point, whether the term is truly applicable.

I have the less difficulty in recommending this, as it is exactly what is done (and the principle of doing it therefore tacitly admitted) in the English tables as to two remarkable diseases. Mr Farr has bronchitis among the sporadic diseases, and influenza among the epidemics, I think quite correctly. But influenza may be very reasonably called an epidemic bronchitis, and certainly it is at least as difficult to distinguish it from many sporadic cases of catarrhus senilis, as to distinguish malignant cholera from the common cholera of this country, proceeding from an increased flow of bile.

Again, Mr Farr has among sporadic diseases what he calls gastro-enteritis, and explains as being inflammation of the mucous membrane of the bowels; but we all know that this inflammation occurs frequently and epidemically in connexion with typhoid fever; and that it is still disputed, whether there is not an epidemic typhoid fever, distinct from the true typhus,

and attended uniformly with this kind of inflammation. Such complex cases, if they have any distinctive name in the English tables, must, I presume, be called epidemic gastro-enteritis, as distinguished from the sporadic cases of that inflammation. This is another example where he must rank some cases of a disease as sporadic, and others, occurring in certain times and places, as epidemic. We have only to extend the practice, which I think he must adopt in regard to these two diseases (if he is to embody in his tables the information which they certainly ought to give in regard to them) to other cases, in order to have a complete justification of the mode of proceeding recommended by us.

For these reasons, I must be permitted to express the hope, that if we shall have the satisfaction of seeing a registration act introduced into Scotland, any influence which this college may possess will be exerted to secure, that the parts of the registers appropriated to the causes of death may be kept in the way that our committee has recommended, in preference to that which has been adopted in England.

NOTE.—*Form of Queries by which the Register is filled up in South Leith.*

No. _____

Name of deceased
(*State the Maiden as well as Married Name of Females.*)

Sex

Condition, as Single or Married, or

Widowed

Age, last birth-day

Relationship to, if not Head of Family,
and Employment, if any

Head of Family and his Employment

Exact place of ordinary residence

(*State the Street, No. of ditto or land.*)

Date of Death, and place of it, if not
the same as ordinary Residence

Date of Burial

Place of Interment

Medical Attendant,

Or if none, the Disease, if distinctly
known, seat of it, and duration

(Signed) _____ Undertaker.

NOTE.—*It is requested that the Medical Attendant insert the Scientific name of the Disease.*

Seat of Disease

Duration of do.

Disease causing Death

Disease previously existing, if any

(Signed) _____ Med. Att.